



Bricklayer

Course Outline

2022

TRAINING PROFILE CHART

This Training Profile Chart represents Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training at the topic level.

Level One	Transcript Code	Hours
Construction Documents & Sketching	BPRT 124	18
Tools & Equipment	EQPT 134	24
Masonry Materials	MATE 121	12
Mortars Grouts & Adhesives	MSON 124	24
Layout & Fundamental Tasks	MSON 104	18
Building Enclosure & Substrate Preparation	MSON 105	24
General Safety & Job-site Communication	SFTY 121	18
Scaffolding	SCAF 121	12
Masonry Systems 1	MSON 106	90
		240

Level Two	Transcript Code	Hours
Construction Documents 2	BPRT 221	30
Basic Masonry Arches	CNST 203	42
Stone Masonry	MSON 200	42
Surface Bonded Masonry	MSON 204	30
Masonry Restoration 1	MSON 205	36
Masonry Systems 2	MSON 206	60
		240

***Non-harmonized Level 3 Bricklayer is currently not being taught in Saskatchewan for the 2022/23 school year.**

Level Three	Transcript Code	Hours
Construction Documents and Sketching	BPRT 320	
Refractories	CNST 323	
Masonry Restoration	MSON 327	
Estimation	ESTM 320	
Masonry Overlays	MSON 325	
Advanced Bricklaying Techniques	MSON 326	
Reinforced Masonry	MSON 329	
Trade Mathematics	MATH 320	
Masonry Review	REV 320	
Practicum	PRAC 320	

TECHNICAL TRAINING COURSE OUTLINE

This chart outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training sequencing. For the harmonized level of training, a cross reference to the Red Seal Occupational Standard (RSOS) apprenticeship technical training sequencing, at the learning outcome level, is provided.

Level One	8 weeks	240 hours
Construction Documents and Sketching		18 hours
<ul style="list-style-type: none">• identify construction documents• interpret measurement systems and scales• identify construction drawing language• compare various types of drawings• perform basic math used in construction		
Tools and Equipment		24 hours
<ul style="list-style-type: none">• identify measuring and layout tools• identify masonry hand tools• identify portable power tools used in the masonry trade• identify tools and equipment used to mix mortar and grout• identify tools and equipment used for moving materials• operate tools and equipment used in the masonry trade• describe the safe use of powder actuated tools		
Masonry Materials		12 hours
<ul style="list-style-type: none">• describe clay products• describe concrete products• describe additional masonry products		
Mortars, Grouts and Adhesives		24 hours
<ul style="list-style-type: none">• identify the characteristics and properties of mortar• mix mortar to a workable state• perform mortar joint finishes• describe concrete design and mixing• identify adhesives used in masonry construction• identify building code requirements for mortar and concrete		
Layout and Fundamental Tasks		18 hours
<ul style="list-style-type: none">• practice job-site setup• perform building layout procedures• identify masonry unit positions and bond patterns• describe procedures for masonry wall layout• describe cleaning and sealing new masonry surfaces		

Building Enclosure & Substrate Preparation**24 hours**

- describe substrates, foundations and parging procedures
- identify masonry anchors and ties
- describe the building enclosure
- identify air barriers
- identify vapour barriers
- identify insulations

General Safety and Jobsite Communications**18 hours**

- identify occupational health and safety regulations
- select personal protective equipment
- identify fall protection equipment
- identify unsafe working environments and hazard control
- practice hazard identification and control
- identify WHMIS 2015 (GHS)
- use effective communication techniques

Scaffolding**12 hours**

- describe the safe use of ladders and scaffolding
- describe the erection, maintenance, and dismantling of metal access scaffolds
- identify basic rigging operations

Masonry Systems 1**90 hours**

- identify masonry wall systems
- identify masonry wall elements
- identify ornamental bond patterns
- identify building code requirements for masonry wall systems
- describe procedures for laying masonry units
- construct various wall systems

Level Two	8 weeks	240 hours
Construction Documents 2 <ul style="list-style-type: none"> • interpret various types of drawings • use residential construction documents • solve geometric problems in the construction industry • perform material estimating procedures 		30 hours
Basic Masonry Arches <ul style="list-style-type: none"> • identify types of arches and their components • calculate arch geometries • construct a temporary arch support • construct a rough masonry arch 		42 hours
Stone Masonry <ul style="list-style-type: none"> • identify classifications of stone • prepare stone for installation • identify techniques for laying stone • construct a natural full bed stone wall 		42 hours
Surface Bonded Masonry <ul style="list-style-type: none"> • identify surface bonded masonry • prepare substrate for surface bonded masonry • apply surface bonded masonry units 		30 hours
Masonry Restoration 1 <ul style="list-style-type: none"> • analyze restoration requirements for existing buildings • demonstrate restoration procedures 		36 hours
Masonry Systems 2 <ul style="list-style-type: none"> • identify load-bearing masonry assemblies • identify reinforced masonry principles • construct reinforced masonry • identify prefabricated masonry • construct glass block masonry 		60 hours

Level Three

***Non-harmonized Level 3 Bricklayer is currently not being taught in Saskatchewan for the 2022/23 schoolyear.**

Construction Documents and Sketching

- Interpret specifications and contracts
 - Interpret drawings and details for renovations
 - Interpret institutional, commercial and industrial type drawings
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Refractories

- Common refractory vessels and their use
 - Types of refractory materials
 - Use of refractory materials
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Masonry Restoration

- Describe restoration procedures
 - Perform restoration procedures
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Estimating

- Estimate of materials for a commercial building
 - Estimating procedures for masonry construction
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Masonry Overlays

- Decorative wall design
 - Decorative wall construction
 - Identify procedures in overlay work
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Advanced Bricklaying Techniques

- Building layout details
 - Layout of the storey pole
 - Planning a job
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Reinforced Masonry

- Reinforced masonry principles, uses materials and placement
 - Construction of reinforced masonry
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Trade Mathematics

- Mathematical calculations involving decimals, fractions and percents
 - Metric and imperial system of weights and measures
 - Trade problems involving algebra
 - Building material estimation involving concrete
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Practicum

- Practicum project design
 - Practicum project construction
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Masonry Review

- Work related activities
- Masonry systems
- Chimney and fireplace types, masonry heaters and refractory materials
- Construction and layout of masonry arches
- Restoration requirements
- Refractories and corrosion resistant materials
- Miscellaneous masonry

BRICKLAYER TASK MATRIX CHART

This chart outlines the major work activities, tasks and sub-tasks from the 2022 Bricklayer Red Seal Occupational Standard.

The Task Matrix Chart will be updated every year until Harmonization implementation is complete. Implementation for harmonization will take place progressively. Level one to be implemented in 2022/2023. Level 2 in 2023/2024 and level 3 in 2024/2025

*Sub-tasks with numbers in the boxes is where the content will be delivered in training. Harmonization for the Bricklayer trade will be fully implemented for each technical training level.

A – PERFORMS COMMON OCCUPATIONAL SKILLS

Task A-1 Performs safety-related functions	A-1.01 Maintains safe work environment 1	A-1.02 Uses personal protective equipment (PPE) and safety equipment 1		
Task A-2 Uses and maintains tools and equipment	A-2.01 Maintains tools and equipment 1 In context levels 2,3	A-2.02 Uses rigging, hoisting and lifting equipment 1 In context levels 2,3	A-2.03 Uses access equipment 1 In context levels 2,3	
Task A-3 Uses scaffolding	A-3.01 Erects scaffolding 1 In context levels 2,3	A-3.02 Dismantles scaffolding 1 In context levels 2,3	A-3.03 Maintains scaffolding 1 In context levels 2,3	
Task A-4 Organizes work	A-4.01 Uses drawings and specifications 1, 2	A-4.02 Plans daily tasks and activities 1	A-4.03 Prepares jobsite and materials 1	A-4.04 Protects surrounding areas 1

Task A-5 Uses communication and mentoring techniques	A-5.01 Uses communication techniques 1	A-5.02 Uses mentoring techniques
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B – PERFORMS GENERAL MASONRY PRACTICES

Task B-6 Performs substrate preparation	B-6.01 Prepares vertical substrates and foundations 1 In context levels 2,3	B-6.02 Applies parging 1 In context levels 2,3	B-6.03 Installs anchoring/tie systems 1 In context levels 2,3	B-6.04 Installs membrane and flashing 1 In context levels 2,3
	B-6.05 Installs insulation 1 In context levels 2,3			
Task B-7 Performs fundamental masonry tasks	B-7.01 Lays out wall and coursing 1	B-7.02 Finishes joints 1	B-7.03 Cleans new masonry surfaces 1	B-7.04 Seals masonry surfaces 1
Task B-8 Uses mortars, grouts and adhesives	B-8.01 Mixes mortar, concrete, grout and adhesives 1, 2	B-8.02 Uses mortars 2	B-8.03 Uses concrete and grout 1, 2	B-8.04 Uses adhesives 1, 2

C – BUILDS MASONRY SYSTEMS

Task C-9 Builds masonry walls	C-9.01 Builds non-load-bearing walls 1	C-9.02 Builds load-bearing walls 2
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Task C-10 Builds horizontal masonry surfaces	C-10.01 Prepares horizontal substrate	C-10.02 Lays masonry units on horizontal surfaces
Task C-11 Builds and installs prefabricated masonry	C-11.01 Builds prefabricated masonry 2 In context level 3	C-11.02 Erects prefabricated masonry 2 In context level 3
Task C-12 Installs surface-bonded masonry units	C-12.01 Prepares substrate for surface-bonded masonry units 2	C-12.02 Applies surface-bonded masonry units 2

D – BUILDS NATURAL STONE SYSTEMS

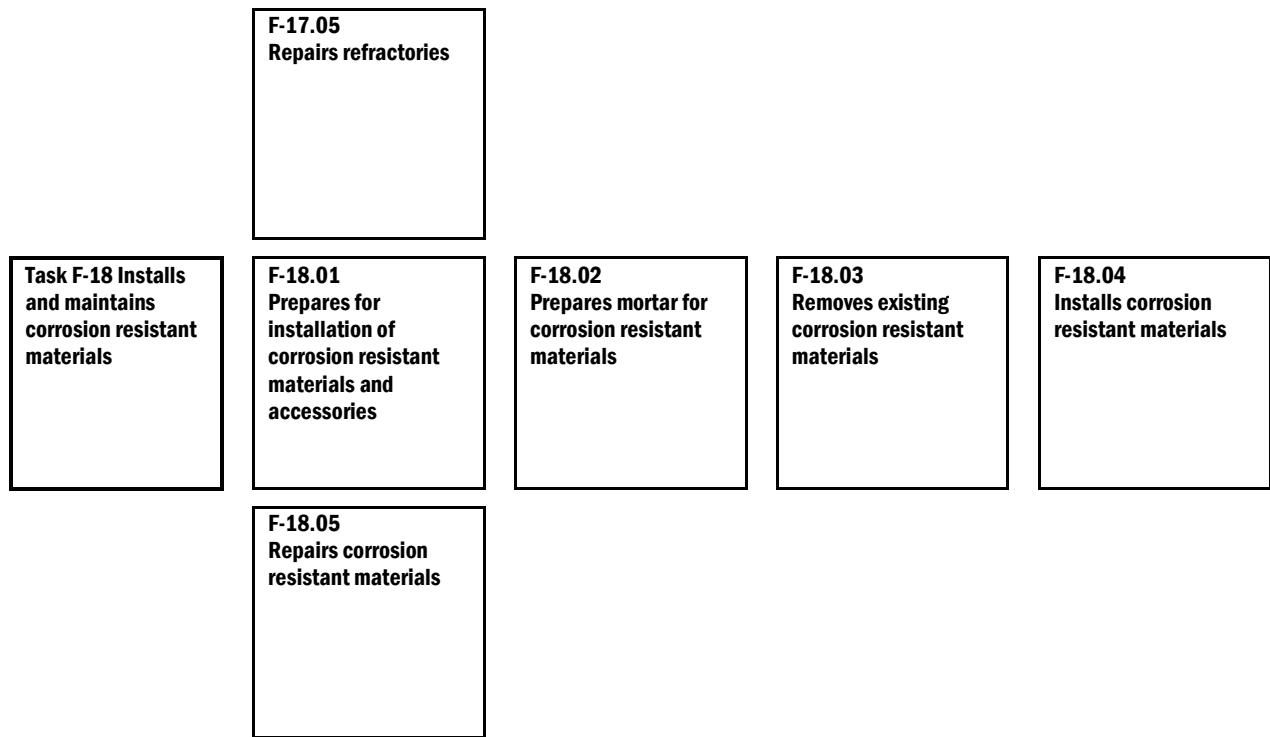
Task D-13 Builds natural stone walls	D-13.01 Prepares natural stone 2 In context level 3	D-13.02 Lays natural stone 2 In context level 3	D-13.03 Damp cures walls 2 In context level 3
Task D-14 Performs mechanically-fastened natural stone cladding procedures	D-14.01 Prepares substrate for cladding	D-14.02 Prepares natural stone for cladding	D-14.03 Installs natural stone cladding

E – BUILDS CHIMNEYS AND FIREPLACES

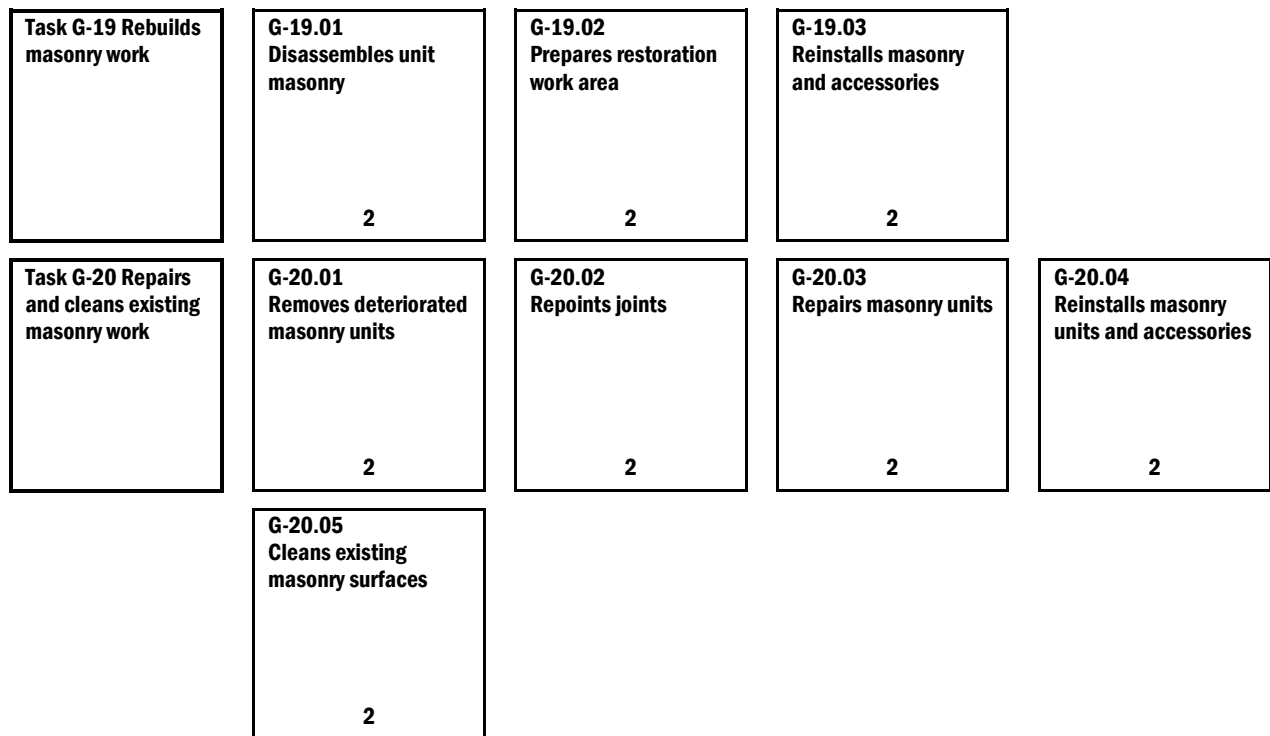
Task E-15 Builds chimneys	E-15.01 Builds foundation supports for chimneys	E-15.02 Lays masonry units to build chimneys	E-15.03 Installs flue lining	E-15.04 Installs related flashings
	E-15.05 Installs caps			
Task E-16 Builds fireplaces	E-16.01 Builds foundation for hearth, firebox, backup material and veneer	E-16.02 Builds hearth, firebox and backup	E-16.03 Installs damper	E-16.04 Builds smoke chamber
	E-16.05 Prepares existing fireplace for insert	E-16.06 Faces fireplaces and inserts		

F – INSTALLS REFRACTORIES AND CORROSION RESISTANT MATERIALS

Task F-17 Installs and maintains refractories	F-17.01 Prepares for installation of refractories and accessories	F-17.02 Prepares mortar for refractories	F-17.03 Removes existing refractories	F-17.04 Installs refractories
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G – PERFORMS RESTORATION



H – PERFORMS ADDITIONAL MASONRY

Task H-21 Installs glass blocks	H-21.01 Prepares work area for installation of glass blocks 2	H-21.02 Lays glass blocks 2		
Task H-22 Installs ornamental and sculpted masonry	H-22.01 Prepares for installation of ornamental and sculpted masonry units	H-22.02 Installs ornamental and sculpted masonry units		
Task H-23 Builds arches	H-23.01 Prepares location for installation of arch 2	H-23.02 Builds template 2	H-23.03 Places template 2	H-23.04 Installs arch masonry units 2
	H-23.05 Removes template 2			

**The Bricklayer Red Seal Occupational Standard (RSOS), describing the “full scope” of the trade, can be found at www.red-seal.ca.*

For more detailed information on course content, please refer to the Bricklayer Guide to Course Content at www.saskapprenticeship.ca